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60/503,490 17 September 2003 (17.09.2003) US(71) Applicant (for all designated States except US): **ANDREW CORPORATION** [US/US]; 19700 Janelia Farm Boulevard, Ashburn, VA (US).

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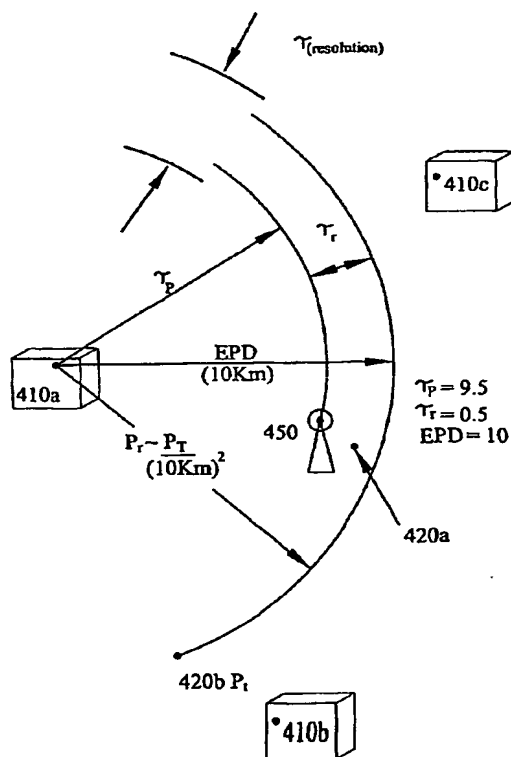
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[Continued on next page]

(54) Title: SYSTEM AND METHOD OF OPERATION FOR NETWORK OVERLAY GEOLOCATION SYSTEM WITH REPEATERS



(57) Abstract: A novel system and method for a network overlay geolocation system operating in a host wireless communication system with repeaters is disclosed. Embodiments of the novel system and method enable wireless communication system to determine if signals being received by system receivers arrive directly from a target mobile appliance or if the signals are passing through a repeater. The system's determination may be based at least in part on the TA of the signal, the power of the received signal, the power of the transmitted signal, the hearability of the signal at system receivers, the hearability of system transmitters at the mobile and the known delays associated with the repeaters. Embodiments of the novel system and method provide a more accurate geolocation of mobiles served by repeater stations than capable in the prior art.



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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04B 7/15; H04Q 7/20

US CL : 455/11.1, 456.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 455/11.1, 456.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Eas

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------------------|
| Y | US 2003/0,083,008 A1 (Baker et al.) 1 May 2003 (01.05.2003), par.0008, lines 1-16; par.0026, lines 22; par.0027, lines 1-11. | 1, 8, 19, 26, 27 |
| Y | US 6,501,955 B1 (Durrant et al.) 31 Dec.2002 (31.12.2002), column 3, lines 1-33; column 4, lines 31-38, column 6, lines 45-67, column 7, lines 14-19. | 1-3, 6,8, 13, 18-20, 23-25 and 27 |
| Y | US 2003/0,162,550 A1 (Kuwahara et al.) 28 August 2003 (28.08.2003), par.0011, page 2, par. 0022, par. 0023, par. 0024. | 1, 4,7, 16, 26 |
| Y, T | US 2003/0,220,075 A1 (Baker et al.) 27 Nov. 2003 (27.11.2003), pages 2-5. | 1, 8, 19, 26, 27 |
| Y, T | US 2004/0,147,221 A1 (Sheynblat et al.) 29 Jul. 2004 (29.06.2004), pages 1-4 | 26-27 |

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